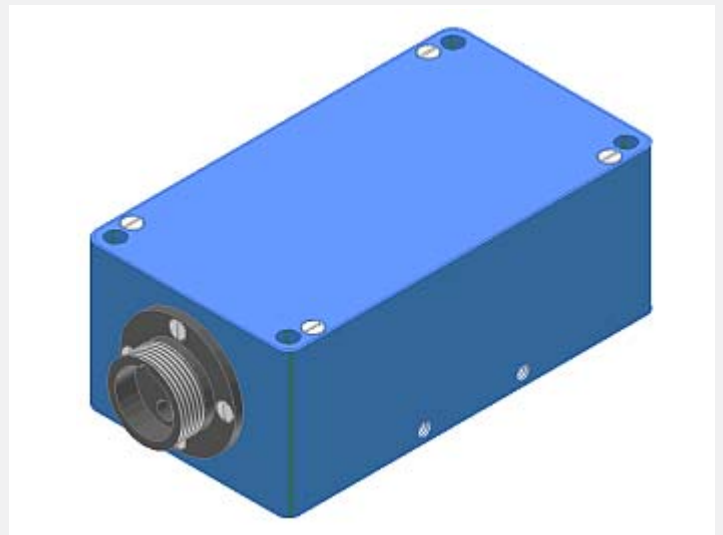


SI-COLO Series

▶ SI-COLO1-LWL

With this color sensor type three primary colors (RED, GREEN, BLUE) are made available as analog signals at the output.

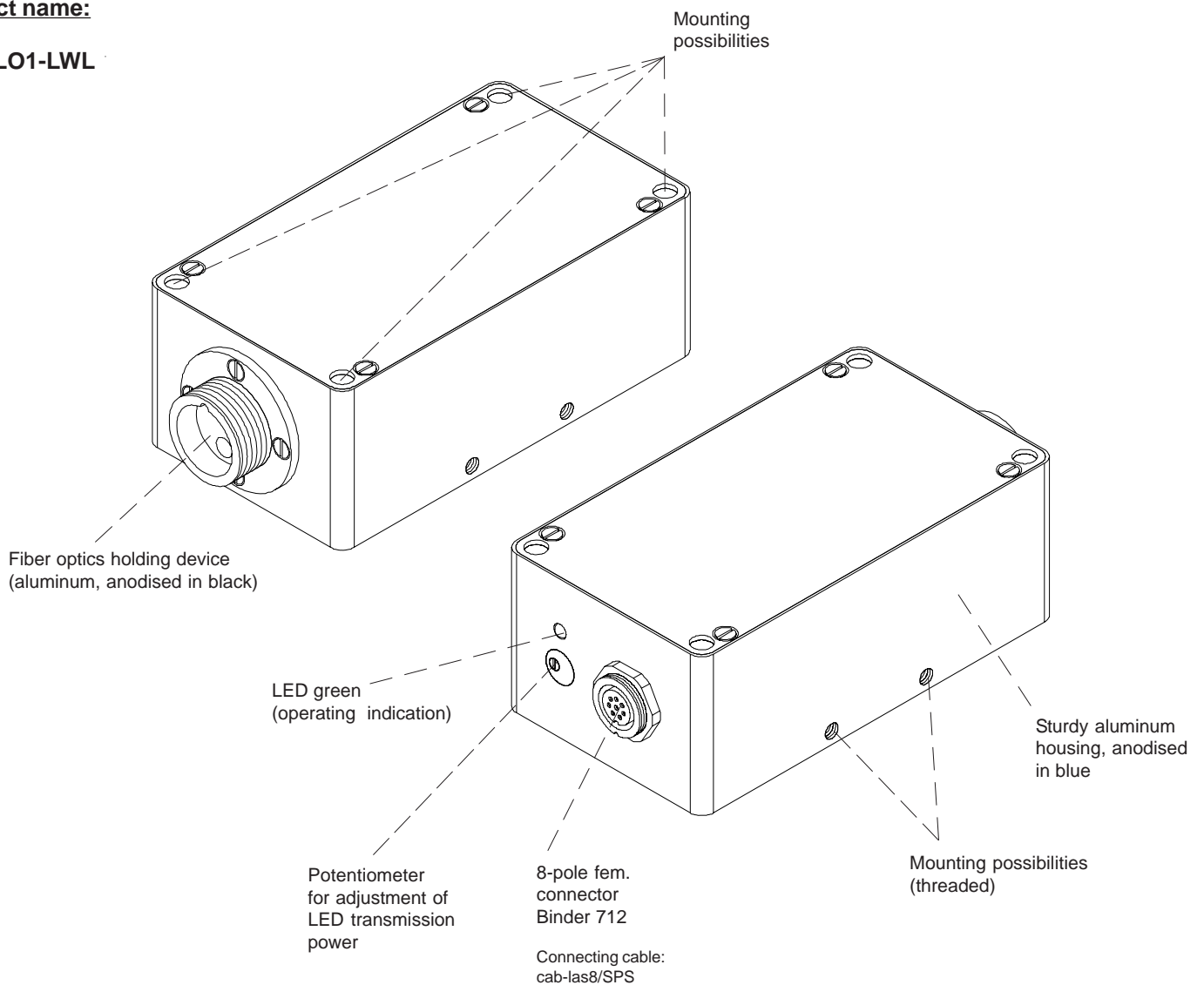
- White-light LED, 100 kHz modulated (diffuse lightening)
- Adjustment of LED transmission power
- 3 analog outputs 0V ... +10V (red, green, blue)
- Insensitive to outside light
- Sturdy aluminum housing
- Optical fibers with various sensor types are available (reflected or transmitted light operation)



Design

Product name:

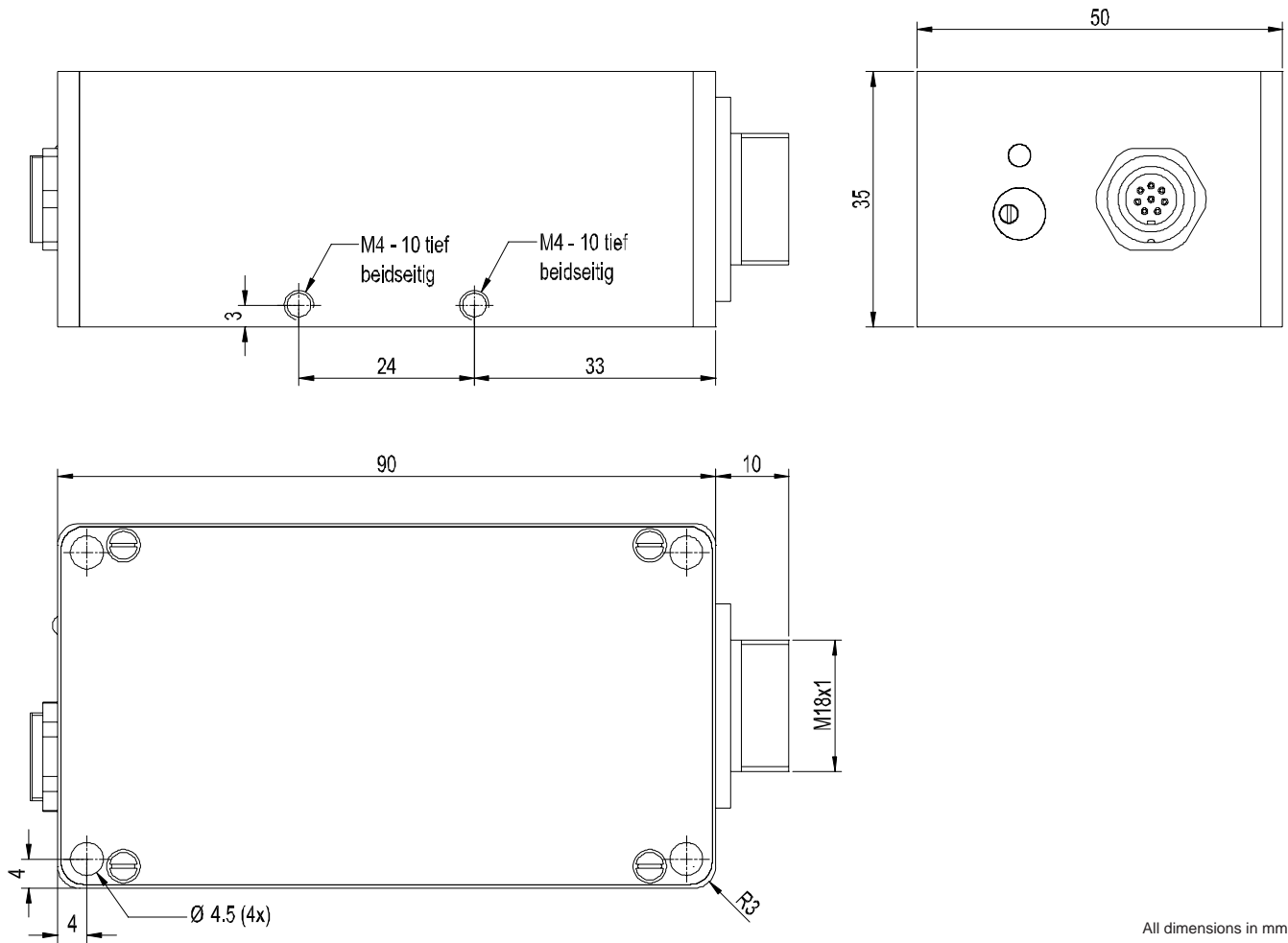
SI-COLO1-LWL




Technical Data

Model	SI-COLO1-LWL
Light source	white light LED, diffuse lightening, modulated 100 kHz
Target distance	With optical fiber: typ. 2 mm ... 10 mm (depends on the optical fiber used) in addition with reflex optics KL-20: typ. 15 mm ... 40 mm in addition with focus lens KL-1: typ. 10 mm ... 200 mm in addition with prism optics KL-90: typ. 10 mm ... 200 mm
Light spot size	Depends on the optical fiber used
Receiver	3-color filter detector
Pulsating light operation	100 kHz
Ambient light	up to 5000 Lux
Enclosure rating	IP64
Current consumption	typ. 180 mA
Voltage supply	+12VDC ... +30VDC, reverse-polarity protected, overload-protected
Type of connector	Connection to PLC: 8-pole female connector (Binder series 712)
EMC test acc. tol	IEC - 801...
Housing material	Aluminum, anodised in blue (fiber optics holding device: aluminum, anodised in black)
Housing dimensions	LxWxH approx. 90 mm x 50 mm x 35 mm (without flange connector and fiber optics adapter)
Operating indication	by means of a green LED
Adjustment of transmission power	by means of a 3-revolutions potentiometer
Operating temperature range	-20°C ... +55°C
Storage temperature range	-20°C ... +85°C
Outputs	3x analog 0V ... +10V (red, green, blue)
Analog band width	typ. 2 kHz (-3dB)

Dimensions



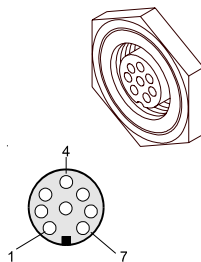
All dimensions in mm

Connector Assignment

Connection of SI-COLO1-LWL to PLC:

8-pole female connector Binder 712

Pin:	Color:	Assignment:
1	white	GND (0V)
2	brown	+12 ... +30VDC
3	green	IN0
4	yellow	ANA RED (0 ... +10V)
5	grey	ANA GREEN (0 ... +10V)
6	pink	ANA BLUE (0 ... +10V)
7	blue	not connected
8	red	not connected

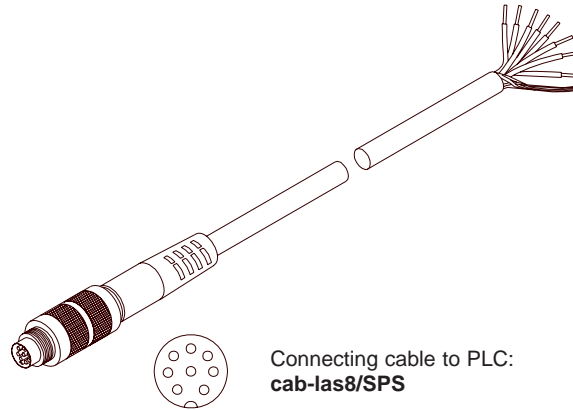




Connecting Cable

Connecting cable for SI-COLO1-LWL:

cab-las8/SPS Length: 2m Outer jacket: PUR

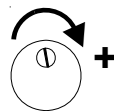


Connecting cable to PLC:
cab-las8/SPS



Setting

Setting of potentiometer:



3-revolutions potentiometer for adjustment of LED transmission power
 Revolution clockwise:
 Increase of transmission power
 (results in an increase of analog signal)



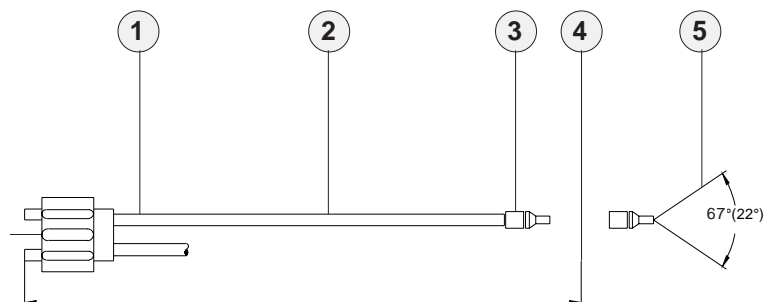
Optical Fibers

- ① **Operating mode** (e.g. D = transmitted light operation)
- ② **Sheathing type** (e.g. S = silicone-metal sheathing)
- ③ **Sensor type** (e.g. A2.0 = sensor type A, variant 2.0)
(in brackets: **size of fiber bundle or fiber gap**, e.g. Ø 2.5 mm)
- ④ **Total length of optical fiber** (e.g. 1200 mm)
- ⑤ **Beam angle** (e.g. standard fiber 67°)

D-S-A2.0-(2.5)-1200-67°

Order code for optical fiber

(Please cf. catalog „LWL Series“ for detailed information on the various optical fibers available)



Dimensions of adaptor

Attachment optics (e.g. focus lenses)

Overview: Optical fibers with reflected light operation

Overview: Optical fibers with transmitted light operation

Important information on mounting of optical fibers

cf. catalog LWL Series

cf. catalog LWL Series

cf. catalog LWL Series

cf. catalog LWL Series

cf. catalog LWL Series